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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,373	07/20/2000	Michael R. Arneson	499.088US1	2873

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EXAMINER	
TSE, YOUNG TOI	
ART UNIT	**PAPER NUMBER**
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/620,373	ARNESON ET AL.	
	Examiner	Art Unit	
	YOUNG T. TSE	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2006 and 02 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-14,16-24 and 26-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8* is/are rejected.

7)☒ Claim(s) *1-7,10-14,16-24 and 26-29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., monitoring temperature and increasing the output swing to correct for the decrease in output voltage swing that occurs naturally as temperature increases and deskewing a single receive signal as a function of skew detected between data lines in the communications medium) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

2. The Applicants also argue that Doluca states that cold temperatures and fast process variations increase the drive of the clock driver, causing the output voltage swing to increase, which increases power dissipation. Doluca does not teach or suggest, however, how to control for variations in temperature and/or process. In contrast, Applicant teaches, and claims in claim 8, monitoring temperature and increasing the output swing to correct for the decrease in output voltage swing that occurs naturally as temperature increases.

Doluca states that cold temperatures and fast process variations increase the drive of the clock driver, causing the output voltage swing to increase, which increases power dissipation. Doluca also states that another approach must be used to control

the clock voltage swing. The invention modifies the clock driver circuit to achieve the limited voltage swing in a controlled manner. Column 4, lines 59-62. Therefore, as taught by Doluca, a person of ordinary skill in the art would know that the voltage swing of a clock driver is controllable (either crease or decrease) by a control circuit as a function of temperature.

3. The Applicants further argue that Miller describes a method of deskewing data received from two or more data receivers in order to time-align the data. This is needed in order to distinguish between reflections of a signal transmitted from a single source (often referred to as "diversity signals"). A deskew buffer is used to store a stream of data from each of two or more satellites and the contents of the deskew buffers are time-aligned.

Although Miller describes a method of deskewing data received from two or more data receivers in order to time-align the data, wherein each channel comprises a deskew buffer 506 for deskewing a respective received signal from each of the two or more data receivers 216.

Drawings

4. The drawings were received on June 30, 2006. These drawings are acceptable.

Claim Objections

5. Claims 1-7, 10-14, 16-24 and 26-29 are objected to because of the following informalities:

In claim 1 (line 2), claim 3 (line 2), claim 5 (line 2), claim 10 (line 11), claim 13 (line 11), claim 16 (line 11), claim 20 (line 6), claim 23 (line 6), and claim 26 (line 7), the term "an output," should be deleted since "an output" is the same as "a driver line" as recited in the claims (it also lacks connection or cooperation with the other claimed elements in each claim).

In claim 1 (line 8), claim 3 (line 5), claim 5 (line 8), claim 10 (line 17), claim 13 (line 18), claim 16 (line 17), claim 20 (line 12), claim 23 (line 12), and claim 26 (line 13), the term "an canceller/equalizer" should be "a canceller/equalizer".

In claim 13, line 17, "a canceller/equalizer connected to" should be "wherein the canceller/equalizer is connected to"; and line 19, "a receiver connected to" should be "wherein the receiver is connected to".

In claim 16, between lines 1 and 2, insert "a communications medium;".

In claim 20, between lines 1 and 2, insert "a communications medium;"; and line 4, "including a driver circuit" should be "including a driver output, a driver circuit" .

In claim 23, between lines 1 and 2, insert "a communications medium;" and line 4, "a driver" should be "a driver including a driver output, a driver circuit and an impedance control circuit".

In claim 26, between lines 1 and 2, insert "a communications medium;" and line 4, "including a driver circuit" should be "including a driver output, a driver circuit".

The dependent claims 2, 4, 6-7, 11-12, 14, 17-19, 21-22, 24 and 27-29 are objected to because they are depended upon the independent claims 1, 3, 5, 10, 13, 16, 20, 23 and 26, respectively.

Appropriate correction is required.

Double Patenting

6. Applicant is advised that should claims 16, 18, 26 and 28 be found allowable, claims 13, 14, 23 and 24 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (U. S. Patent No. 6,573,764) in view of Doluca (U. S. Patent No. 5,760,620) and Miller et al. U.S. Patent No. 6,181,912 (hereinafter "Miller").

With respect to claim 8, Taylor discloses a driver/receiver circuit in Fig. 7 or Fig. 8 for use at one end of a simultaneous bi-directional differential signal line while being driven at the other end by a similar circuit.

Referring to Fig. 8, the driver 30 drives an output signal (36A or 36B) on a communication medium (35A or 35B) as a function of a first signal, modifies the output signal as a function of an external signal, increases a voltage swing of the output signal, the receiver 31 receives a second signal (38A or 38B) from the communication medium, combines the first and second signals to extract a receive signal as the output signal 39 of the receiver 31. Column 5, lines 21-43 and column 9, line 21 to column 10, line 20.

Taylor fails to teach that the increased voltage swing of the output signal as a function of temperature.

Doluca discloses an analogue driver circuit drives a high-capacitance clock signal line inside an integrated circuit and teaches that cold temperatures and fast process variations increase the drive of a clock driver, causing the output voltage swing to increase, which increases power. Column 4, lines 56-59.

Therefore, it would have been obvious to one of ordinary skill in the art to increase the voltage swing by adjusting the temperature as taught by Doluca in order to increase the power of the driver circuit.

Taylor also fails to show or suggest that the output signal 39 of the receiver 31 to be deskewed.

Miller discloses a transceiver circuit in Fig. 5 comprising data receivers 216 and deskew buffers 506 for temporary storing the deskewed data prior the transmission of the received data.

Therefore, it would have been obvious to one of ordinary skill in the art to deskew the received data before further processing of the received data as taught by Miller.

Allowable Subject Matter

10. Claims 1-7, 10-12, 16-22 and 26-29 would be allowable if rewritten or amended to overcome the objection(s) set forth in this Office action.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bailey et al. relates to a method and apparatus for ensuring that a clocked circuit will function after fabrication, regardless of the presence of clock skew.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-30513051. The examiner can normally be reached on Monday-Thursday and alternative Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The Central FAX Number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YOUNG T. TSE
Primary Examiner
Art Unit 2611